

What is claimed:

1. A communication system, comprising:
a protocol converting controller that receives a first upstream mobile terminal message having a mobile terminal communication protocol and converts the first upstream mobile terminal message into a first upstream Internet message having an Internet protocol.
2. The communication system as claimed in claim 1, wherein the protocol converting controller receives a first downstream Internet message having the Internet protocol and converting the first downstream Internet message into a first downstream mobile terminal message having the mobile terminal communication protocol,
wherein the first downstream Internet message is responsive to the first upstream Internet message.
3. The communication system as claimed in claim 1, wherein the mobile terminal communication protocol is one of an SMS protocol and USSD protocol.
4. The communication system as claimed in claim 1, wherein the Internet protocol is one of an HTTP protocol and an XML protocol.
5. The communication system as claimed in claim 1, wherein the protocol converting controller receives the first upstream mobile terminal message, selects a first upstream Internet address corresponding to the first upstream mobile terminal message, and generates the first upstream Internet message based on the first upstream Internet address,
wherein the first upstream Internet message is supplied to an Internet application.

6. The communication system as claimed in claim 5, wherein the protocol converting controller determines if the first upstream mobile terminal message is part of an existing session with the Internet application,

wherein, when the first upstream mobile terminal message is part of the existing session,
5 the protocol converting controller selects a first selected Internet address as the first upstream Internet address, and

wherein, when the first upstream mobile terminal message is not part of the existing session, the protocol converting controller selects a second selected Internet address as the first upstream Internet address.

7. The communication system as claimed in claim 6, wherein a first downstream Internet message comprises the first selected Internet address, first downstream data corresponding to a first downstream mobile terminal message, and a first responsive mobile terminal message that is associated with the first selected Internet address,

5 wherein the first downstream Internet message is supplied to the protocol converter controller and the protocol converter controller generates the first downstream mobile terminal message based on the first downstream data,

wherein the first upstream mobile terminal message is supplied to the protocol converting controller in response to the first downstream mobile terminal message, and

10 wherein the protocol converter controller determines that the first upstream mobile terminal message is part of the existing session with the Internet application when the first upstream mobile terminal message corresponds to the first responsive mobile terminal message.

8. The communication system as claimed in claim 7, wherein the first downstream Internet message further comprises a first downstream identification corresponding to a

destination of the first downstream mobile terminal message and a first downstream destination address of the Internet application,

5 wherein the protocol converter controller receives the first upstream mobile terminal message, a first upstream identification corresponding to a source of the first upstream mobile terminal message, and a first upstream destination address corresponding to the first upstream mobile terminal message, and

 wherein the protocol converter controller determines that the first upstream mobile
10 terminal message is part of the existing session with the Internet application when the first upstream mobile terminal message corresponds to the first responsive mobile terminal message, the first upstream identification corresponds to the first downstream identification, and the first upstream destination address corresponds to the first downstream destination address.

9. The communication system as claimed in claim 8, wherein, when the protocol converter controller determines that the first upstream mobile terminal message is not part of the existing session with the Internet application, the protocol converter controller selects the second selected Internet address based on the first upstream destination address.

10. The communication system as claimed in claim 7, wherein, if the first downstream Internet message further comprises a cache parameter, the protocol converter controller generates a second upstream Internet message based on the first selected Internet address before the protocol converter controller receives the first upstream mobile terminal
5 message,

 wherein the protocol converter controller receives a second downstream Internet message corresponding to the second upstream Internet message,

wherein the second downstream Internet message comprises second downstream data corresponding to a second downstream mobile terminal message,

10 wherein, when the protocol converter controller receives the first upstream mobile terminal message, the protocol converter controller determines if the second downstream mobile terminal message is responsive to the first upstream mobile terminal message, and

wherein, when the second downstream mobile terminal message is responsive to the first upstream mobile terminal message, the protocol converter controller outputs the second
15 downstream mobile terminal message.

11. The communication system as claimed in claim 1, wherein the protocol converting controller receives a first downstream Internet message from an Internet application before receiving the first upstream mobile terminal message,

wherein the first downstream Internet message comprises a first downstream cookie,

5 wherein the protocol converting controller determines if the Internet application requires the first downstream cookie to appropriately process the first upstream Internet message,

wherein, when the first downstream cookie is required to appropriately process the first upstream Internet message, the protocol converting controller outputs the first downstream cookie as a first upstream cookie, along with the first upstream Internet message.

12. The communication system as claimed in claim 11, wherein first downstream Internet address further comprises a first downstream identification and a first selected Internet address, and

wherein the protocol converting controller determines that the Internet application
5 requires the first downstream cookie to appropriately process the first upstream Internet

message if the first upstream identification and the first upstream Internet address respectively correspond to the first downstream identification and the first selected Internet address.

13. A communication system, comprising:

a protocol converting controller that receives a first downstream Internet message having an Internet protocol and converts the first downstream Internet message into a first downstream mobile terminal message having a mobile terminal communication protocol,

5 wherein the first downstream Internet message comprises an Internet data page having:

first downstream mobile terminal message data that is used to generate the first downstream mobile terminal message;

first responsive mobile terminal message data corresponding to a first responsive upstream mobile terminal message that responds to the first downstream mobile terminal message; and
10

a first responsive Internet address that corresponds to the first responsive upstream mobile terminal message,

wherein the protocol converting controller generates the first downstream mobile terminal message based on the first downstream mobile terminal message data and outputs the
15 first downstream mobile terminal message.

14. The communication system as claimed in claim 13, wherein the mobile terminal communication protocol is one of an SMS protocol and a USSD protocol.

15. The communication system as claimed in claim 13, wherein the Internet protocol is one of an HTTP protocol and an XML protocol.

16. The communication system as claimed in claim 13, wherein the protocol converting controller receives a first upstream mobile terminal message having the mobile terminal communication protocol and determines if the first upstream mobile terminal message corresponds to the first responsive upstream mobile terminal message,

5 wherein, when the first upstream mobile terminal message corresponds to the first responsive upstream mobile terminal message, the protocol converting controller generates a first upstream Internet message having the Internet protocol, and

wherein the first upstream Internet message comprises the first responsive Internet address.

17. The communication system as claimed in claim 16, wherein the protocol converting controller receives the first downstream Internet message from an Internet application,

5 wherein the first downstream Internet message further comprises a first downstream cookie,

wherein the protocol converting controller determines if the Internet application requires the first downstream cookie to appropriately process the first upstream Internet message,

10 wherein, when the first downstream cookie is required to appropriately process the first upstream Internet message, the protocol converting controller outputs the first downstream cookie as a first upstream cookie, along with the first upstream Internet message.

18. A communication system, comprising:

an Internet server that receives a first upstream Internet message having an Internet protocol, wherein the first upstream Internet message is based on a first upstream mobile terminal message having an mobile terminal communication protocol,

5 wherein the Internet server contains an Internet application that generates a first downstream Internet message based on the first upstream Internet message,

wherein the first downstream Internet message comprises an Internet data page having:

first downstream mobile terminal message data that is used to generate a first downstream mobile terminal message that response to the first upstream mobile terminal data;

10 first responsive mobile terminal message data corresponding to a first responsive upstream mobile terminal message that responds to the first downstream mobile terminal message; and

a first responsive Internet address that corresponds to the first responsive upstream mobile terminal message.

19. The communication system as claimed in claim 18, wherein the mobile terminal communication protocol is one of an SMS protocol and a USSD protocol.

20. The communication system as claimed in claim 18, wherein the Internet protocol is one of an HTTP protocol and an XML protocol.

21. The communication system as claimed in claim 18, wherein the first downstream Internet message further comprises a first downstream cookie that is required for a second upstream Internet message to be appropriately processed by the Internet application, and

wherein the second upstream Internet message corresponds to the first responsive
5 upstream mobile terminal message.

22. A communication method, comprising:

(a) receiving a first upstream mobile terminal message having a mobile terminal communication protocol; and

(b) converting the first upstream mobile terminal message into a first upstream
5 Internet message having an Internet protocol.

23. The method as claimed in claim 22, further comprising:

(c) receiving a first downstream Internet message having the Internet protocol and
converting the first downstream Internet message into a first downstream mobile terminal
5 message having the mobile terminal communication protocol,

wherein the first downstream Internet message is responsive to the first upstream
Internet message.

24. The method as claimed in claim 22, wherein the mobile terminal communication
protocol is one of an SMS protocol and a USSD protocol.

25. The method as claimed in claim 22, wherein the Internet protocol is one of an
HTTP protocol and an XML protocol.

26. The method as claimed in claim 22, wherein the step (b) comprises:

(b1) selecting a first upstream Internet address corresponding to the first upstream
mobile terminal message; and

(b2) generating the first upstream Internet message based on the first upstream
5 Internet address,

wherein the first upstream Internet message is supplied to an Internet application.

27. The method as claimed in claim 26, wherein the step (b1) comprises:

(b1a) determining if the first upstream mobile terminal message is part of an existing session with the Internet application;

5 (b1b) when the first upstream mobile terminal message is part of the existing session, selecting a first selected Internet address as the first upstream Internet address; and

(b1c) when the first upstream mobile terminal message is not part of the existing session, selecting a second selected Internet address as the first upstream Internet address.

28. The method as claimed in claim 27, further comprising:

(c) receiving a first downstream Internet message comprising the first selected Internet address, first downstream data corresponding to a first downstream mobile terminal message, and a first responsive mobile terminal message that is associated with the first selected Internet address;

(d) generating the first downstream mobile terminal message based on the first downstream data; and

(e) generating the first upstream mobile terminal message in response to the first downstream mobile terminal message, and

wherein the step (b1a) comprises:

(b1a1) determining that the first upstream mobile terminal message is part of the existing session with the Internet application when the first upstream mobile terminal message corresponds to the first responsive mobile terminal message.

29. The method as claimed in claim 28, wherein the first downstream Internet message further comprises a first downstream identification corresponding to a destination of

the first downstream mobile terminal message and a first downstream destination address of the

5 Internet application,

wherein the step (a) comprises:

(a1) receiving a first upstream identification corresponding to a source of the first upstream mobile terminal message and a first upstream destination address corresponding to the first upstream mobile terminal message, and

10 wherein the step (b1a1) comprises:

(b1a1a) determining that the first upstream mobile terminal message is part of the existing session with the Internet application when the first upstream mobile terminal message corresponds to the first responsive mobile terminal message, the first upstream identification corresponds to the first downstream identification, and the first upstream destination address
15 corresponds to the first downstream destination address.

30. The method as claimed in claim 29, wherein step (b1c) comprises:

(b1c1) when the first upstream mobile terminal message is not part of the existing session with the Internet application, selecting the second selected Internet address based on the
5 first upstream destination address.

31. The method as claimed in claim 28, further comprising:

(f) determining if the first downstream Internet message further comprises a cache parameter;

5 (g) when the first downstream Internet message comprises the cache parameter, generating a second upstream Internet message based on the first selected Internet address before receiving the first upstream mobile terminal message;

(h) receiving a second downstream Internet message corresponding to the second upstream Internet message, wherein the second downstream Internet message comprises second downstream data corresponding to a second downstream mobile terminal message;

(i) when the first upstream mobile terminal message is received, determining if the second downstream mobile terminal message is responsive to the first upstream mobile terminal message; and

(j) when the second downstream mobile terminal message is responsive to the first upstream mobile terminal message, outputting the second downstream mobile terminal message.

32. The method as claimed in claim 22, further comprising:

(c) receiving a first downstream Internet message from an Internet application before receiving the first upstream mobile terminal message, wherein the first downstream Internet message comprises a first downstream cookie;

(d) determining if the Internet application requires the first downstream cookie to appropriately process the first upstream Internet message; and

(e) when the first downstream cookie is required to appropriately process the first upstream Internet message, outputting the first downstream cookie as a first upstream cookie, along with the first upstream Internet message.

33. The method as claimed in claim 22, wherein first downstream Internet address further comprises a first downstream identification and a first selected Internet address, and wherein the step (d) comprises:

(d1) determining that the Internet application requires the first downstream cookie to appropriately process the first upstream Internet message if the first upstream identification and

the first upstream Internet address respectively correspond to the first downstream identification and the first selected Internet address.

34. A software program contained in a computer readable medium, wherein the software program instructs a communication system to perform a routine, comprising:

(a) receiving a first upstream Internet message having an Internet protocol, wherein the first upstream Internet message is based on a first upstream mobile terminal message having an mobile terminal communication protocol,

(b) generating a first downstream Internet message based on the first upstream Internet message, wherein the first downstream Internet message comprises an Internet data page having:

first downstream mobile terminal message data that is used to generate a first downstream mobile terminal message that response to the first upstream mobile terminal data;

first responsive mobile terminal message data corresponding to a first responsive upstream mobile terminal message that responds to the first downstream mobile terminal message; and

a first responsive Internet address that corresponds to the first responsive upstream mobile terminal message.

35. The software program as claimed in claim 34, wherein the mobile terminal communication protocol is one of an SMS protocol and a USSD protocol.

36. The software program as claimed in claim 34, wherein the Internet protocol is an HTTP protocol and an XML protocol.

